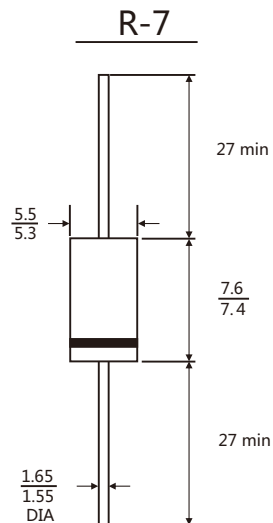
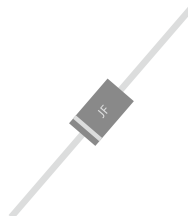


FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260 °C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



RoHS
COMPLIANT



MECHANICAL DATA

- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 1.55 grams

Dimensions in inches and (millimeters)

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

| PRIMARY CHARACTERISTICS | |
|----------------------------------|-------|
| $I_{F(AV)}$ | 20.0A |
| V_{RRM} | 200V |
| I_{FSM} | 350A |
| V_F at $I_F=20.0A, 25^\circ C$ | 0.86V |
| T_{JMAX} | 150°C |

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|-------------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 200 | V |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{F(AV)}$ | 20.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL) | I_{FSM} | 350 | A |
| Operating junction temperature range | T_J | -55 to+150 | °C |
| Storage temperature range | T_{stg} | -55 to+150 | °C |

RATINGS AND CHARACTERISTIC OF SR20200

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

| Parameter | Test Conditions | | Symbol | TYP. | MAX | Unit |
|-------------------------------|---------------------------|--------------------|---------------------|------|------|---------------|
| Instantaneous forward voltage | $T_A=25^{\circ}\text{C}$ | $I_F=20.0\text{A}$ | V_F ¹⁾ | 0.86 | 0.94 | V |
| | | $I_F=10.0\text{A}$ | | 0.78 | - | |
| | | $I_F=5.0\text{A}$ | | 0.72 | - | |
| | $T_A=150^{\circ}\text{C}$ | $I_F=20.0\text{A}$ | | 0.73 | - | |
| | | $I_F=10.0\text{A}$ | | 0.64 | - | |
| | | $I_F=5.0\text{A}$ | | 0.58 | - | |
| Reverse current | $T_A=25^{\circ}\text{C}$ | $V_R=200\text{V}$ | I_R ²⁾ | 2.0 | 20 | μA |
| | $T_A=100^{\circ}\text{C}$ | | | 0.2 | - | mA |
| | $T_A=125^{\circ}\text{C}$ | | | 1.0 | 2.0 | |
| Typical junction capacitance | 4V,1MHz | | C_J | 295 | | pF |

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width $\leq 40\text{ms}$

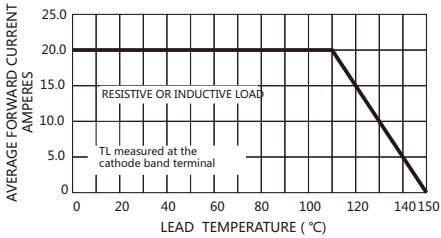
THERMAL CHARACTERISTICS

| Parameter | Symbol | SR20200 | Unit |
|--|-----------------|---------|-----------------------------|
| Typical thermal resistance ³⁾ | $R_{\theta JA}$ | 10.0 | $^{\circ}\text{C}/\text{W}$ |
| | $R_{\theta JL}$ | 2.1 | |

3.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

RATINGS AND CHARACTERISTIC OF SR20200

FIG.1-FORWARD CURRENT DERATING CURVE



注：曲线拐点温度值由公式 $T_{JMAX} - V_f @ (I_f(AV), 25^{\circ}C) \times I_f(AV) \times R_{\theta JL}$ 计算得出，设计时曲线仅供参考

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

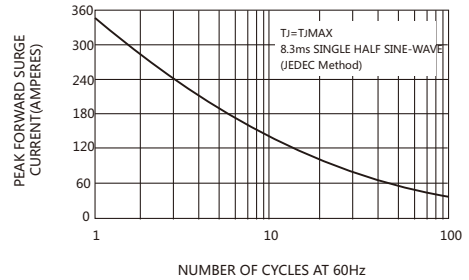


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

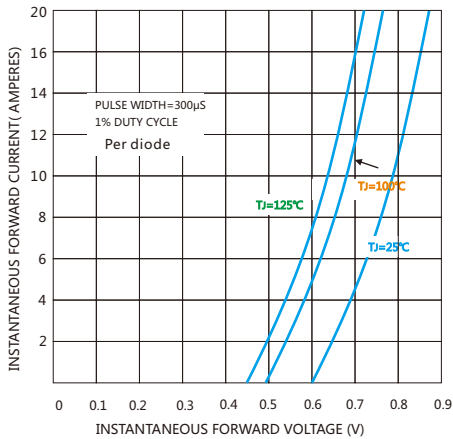


FIG.4-TYPICAL REVERSE CHARACTERISTICS

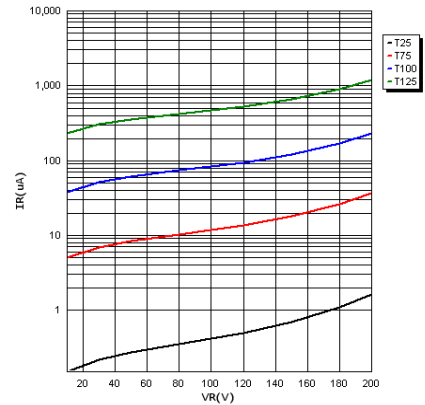
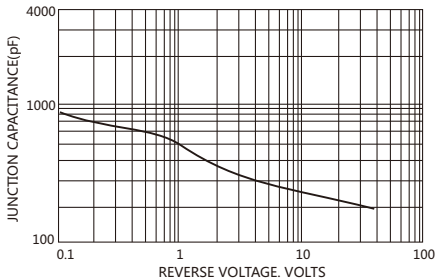


FIG.5-TYPICAL JUNCTION CAPACITANCE



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